

WHAT IS CLAIMED IS:

1. A spatial light modulator package with drop-in aperture, comprising:

a substrate;

5 a case molded to said substrate and defining a package cavity;

a spatial light modulator in said cavity;

an optically clear top cover supported by said substrate to enclose said spatial light modulator;

10 and

a drop-in aperture between said cover and said spatial light modulator.

2. The spatial light modulator package of Claim 1, wherein said aperture is stamped metal.

15 3. The spatial light modulator package of Claim 1, wherein:

said aperture is separate from said cover glass; and

20 said aperture is mounted on a surface inside said package cavity and in close proximity to said spatial light modulator.

4. The spatial light modulator package of Claim 1, wherein said aperture prevents stray light from reaching surfaces around perimeter of said spatial
25 light modulator.

5. The spatial light modulator package of Claim 1,
further comprising:
a built-in light shield fabricated on the
surface of said spatial light modulator chip.
- 5 6. The spatial light modulator package of Claim 1,
wherein said cover is mounted out of the plane of
the spatial light modulator.
7. The spatial light modulator package of Claim 1, said
cover having an anti-reflective coating.
- 10 8. The spatial light modulator package of Claim 1, said
spatial light modulator being a micromirror.
9. The spatial light modulator package of Claim 1,
further comprising:
an environmental control material carrier in
15 said cavity; and
getters held by said carrier.
10. The spatial light modulator package of Claim 9,
wherein said getters are comprised of moisture
collecting desiccants.
- 20 11. The spatial light modulator package of Claim 10
wherein said aperture and carrier are combined.
12. A projection display comprising:
a light source for producing a beam of light;
a first condenser lens for focusing said beam
25 of light;

a color filter wheel for filtering said focused beam of light;

a second condenser lens for focusing said filtered beam of light;

5 a spatial light modulator array mounted in a package with a drop-in aperture and window for spatially modulating said beam of light; and

a projection lens for focusing said spatially modulated beam of light on an image plane.

10 13. The projection display of Claim 12 wherein:

said spatial light modulator array is a micromirror array; and

said aperture is mounted in close proximity to said micromirror array to limit the light reaching
15 the area surrounding said micromirror array; and

said cover glass is mounted out of the plane of said micromirror array.

14. The micromirror projection display of Claim 12 further comprising at least one environmental
20 control material carrier.

15. The micromirror projection display of Claim 14 wherein said environmental control material carrier holds at least one environmental control material selected from the group consisting of: moisture

collecting desiccants and lubricant storage
reservoirs.

16. The micromirror projection display of Claim 15
wherein said desiccants collect moisture in said
5 micromirror package.